Baker-Polito Administration Awards \$4 Million in Gap II Grant Funding for Energy Efficiency, Renewable Energy Installation at 36 Water Treatment Facilities - April 19, 2018

MassDEP, DOER, and MassCEC continue to work collaboratively in developing a streamlined pathway that leverages technical and financial assistance resources together for implementing energy-saving projects at municipal drinking water and wastewater facilities. In April 2018, MassDEP awarded \$4 million of state 'Gap' grant funding to jump-start over \$17 million of clean energy improvement projects at drinking water and wastewater facilities across the Commonwealth. In total, these 36 clean energy projects will save facilities \$1.3 million annually; generate approximately 9.68 megawatt hours in annual electricity savings or on-site energy generation; leverage 1.15 million in additional energy utility incentives; and result in a good public return-on-investment (see project listing and details below).

MUNICIPALITY	FUNCTION	TOTAL GRANT AWARD	PROJECT DETAILS
Ayer (Projected savings of \$ 4,877 and 29,688 kWh / year)	Wastewater	\$46,785	For wastewater pumping system control optimization at the Central Avenue station.
Bernardston Fire and Water District (Projected savings of \$58,900 and 208,500 kWh / year) Facility will achieve Zero-Net Energy Status	Drinking Water	\$200,000	Install a 150 kW solar photovoltaic system (ground-mounted) at the Pratt Field Wellhead Area; install a soft start and variable speed drive to Sugar House pumping station.
Blackstone (Projected savings of \$6,657 and 35,108 kWh / year) 42% reduction in annual electricity usage	Drinking Water	\$45,521	Decommission well #5 and install a new variable frequency drive -controlled submersible high-lift pump in Well No. 5A.
Brockton (Projected savings of \$40,994 and 292,812 kWh / year) 26% reduction in annual electricity usage	Wastewater	\$200,000	Install an Aerzen Turbo Blower to the aeration system at the Brockton Wastewater Treatment Plant.
Charlemont Sewer District (Projected savings of \$3,800 and 13,000 kWh of on-site generation / year)	Wastewater	\$45,000	Install a 11.7 kW solar photovoltaic system (roof-mounted), above flood level, at the wastewater treatment plant. New solar system is part of a larger vulnerability preparedness FEMA-funded project.
Chicopee (Projected savings of \$144,430 and 558,450 kWh / year) Better oxygen transfer will increase sludge treatment and reduce disposal costs	Wastewater	\$200,000	Replacement of the existing onsite pressure swing absorption oxygen aeration system (major components 1974 vintage) with a bulk delivered liquid oxygen system.
Dartmouth (Projected savings of \$\$83,509 and 460,675 kWh and 1,341 therms / year)	Wastewater & Drinking Water	\$107,057	For Pumping system optimization (PSO) upgrades (VFD, motor, pump rebuilds) to Municipal drinking water wells A, B,C, D; boiler replacement to the sludge building and installation of 3 emergency generator block heaters at the wastewater treatment plant.



Fairhaven (Projected savings of \$12,038 and 66,876 kWh /year)	Wastewater	\$23,924	Install a variable frequency drive to aeration blower #3 and a new heat pump system to the existing emergency generator at the wastewater plant.
Fitchburg (Projected savings of \$10,203 and 65,297 kWh of on-site generation / year) Implementation of a 2012 feasibility study	Drinking Water	\$200,000	Replace the existing drinking water pressure reducing valve at Narrows Road with a 10 kW hydroelectric "Pump as Turbine" (PAT) generation system.
Franklin (Projected savings of \$10,329 and 70,686 kWh / year)	Drinking Water	\$79,380	Install 10 high efficiency motors to five drinking water wells and two booster stations.
Groton (Projected savings of \$8,000 and 55,158 kWh / year)	Drinking Water	\$83,295	Install variable speed pumps and electrical controls to Whitney Well drinking water (pumps #1 & #2) for both energy efficiency and peak electrical demand management.
Hatfield (Projected savings of \$32,679 and 217,861 kWh / year)	Wastewater	\$200,000	For energy efficiency solids handling modifications by converting one of the sludge holding tanks (previously served as a digester) to a gravity thickener at the wastewater treatment plant.
Hull (Projected savings of \$18,686 and 118,946 kWh / year) Implementation of a 2004 efficiency study	Wastewater	\$61,685	For aeration blower optimization; installation of a variable speed drive to the odor control fan and an emergency generator block heater at the wastewater treatment plant.
Kingston (Projected savings of \$5,511 and 8,892 kWh and 3,128 therms / year)	Wastewater	\$76,020	Replace the existing cast iron boiler with a new 94% efficient condensing boiler; optimize the circulation of the hot glycol in the heating system by replacing the motors and installing a variable speed drive at the wastewater treatment plant.
Lenox (Projected savings of \$56,221 and 443,093 kWh / year) Improved aeration will improve taste and odor problems	Drinking Water	\$98,542	Install a variable speed drive to a low-lift pump at the Root Reservoir water treatment plant; install new solar-powered mixers to the Lower and Upper Root Reservoirs.
Lynnfield Water District (<i>Projected savings of \$7,348 and 38,470 kWh</i> / year)	Drinking Water	\$79,443	Replace pumps #1 & #2, motors, and variable speed drives at the Lynnfield drinking water booster pumping station.
Massachusetts Water Resources Authority (Projected savings of \$13,284 and 73,783 kWh / year)	Wastewater & Drinking Water	\$81,027	Install variable frequency drives on two circulation water pumps at the Union Park Detention & Treatment and Deer Island Facilities; and install 222 feet of water pipe insulation in an underground vault at Loring Road to reduce the need for dehumidification.





Middleborough (Projected savings of \$5,037 and 14,558 kWh of on-site generation / year)	Drinking Water	\$43,437	Install a 9.75 kW (ground-mounted, dual-access tracker) solar photovoltaic system to the water treatment.
Milford (Projected savings of \$6,259 and 32,941 kWh / year	Wastewater	\$13,380	Install an energy efficient rotary screw air compressor with variable speed drive at the wastewater treatment plant.
Millbury (Projected savings of \$11,028 and 33,045 kWh of on-site generation / year)	Wastewater	\$155,385	Install a 25 kW solar photovoltaic carport system and install a 1.5 ton air source heat pump to the DPW office / sewer building.
Montague (Projected savings of \$33,823 and 261,061 kWh of on-site generation / year	Wastewater	\$150,000	Install a 200 kW solar photovoltaic system (ground-mounted) at the wastewater treatment plant.
Nantucket (Projected savings of \$21,879 and 91,161 kWh of on-site generation / year)	Wastewater	\$200,000	Install a 75 kW roof-mounted solar photovoltaic system on the wastewater sludge building.
North Carver Water District (Projected savings of \$10,800 and 3,280 gallons / year)	Drinking Water	\$58,230	Replace the existing oversized 350 kW propane Pleasant Street emergency generator with a 125 kW generator at the plant.
Orange (Projected savings of \$11,655 and 77,701 kWh / year)	Wastewater	\$200,000	Replace the existing two 50 HP aeration blowers with energy efficient 35 HP mixer / blowers.
Paxton (Projected savings of \$1,069 / and 8,734 kWh year)	Drinking Water	\$22,814	Replace two existing 20-year-old 100hp motors with NEMA premium efficient motors; upgrade existing dehumidification system; and install ductless mini-split for building heating and cooling at the pumping station.
Rockport (Projected savings of \$77,534 / year and 473,613 kWh)	Wastewater	\$81,081	Perform aeration blower control improvements and optimize the aerobic digester blower control system.
Shrewsbury (Projected savings of \$10,956 and 75,581 kWh of on-site generation / year) Implement a MA DOER-funded solar assessment	Drinking Water	\$200,000	Install a 60 kW solar photovoltaic system (ground mounted) to Home Farm water treatment plant.
Beverly/Danvers/Marblehead/Peabody/ Salem (Projected savings of \$52,600 and 375,700 kWh / year) Better oxygen transfer for biological treatment and decreased maintenance costs	Wastewater	\$200,000	Replace the existing three trains of aeration mixer blades with a higher-efficiency blade system at the South Essex Sewage District.
Southwick (Projected savings of \$3,066 and 11,794 kWh / year)	Drinking Water	\$40,546	Install two heat pump systems to preheat the existing 45kW emergency diesel generators to replace the inefficient electric block heaters at the College Highway and North Longyard pump stations.





Taunton (Projected savings of \$11,158 and 101,435 kWh / year)	Wastewater	\$35,500	Install a variable frequency drive on the aeration blower #1 (100HP) motor at the wastewater plant.
Uxbridge (Projected savings of \$356,4882 and 1,980,485 kWh / year) Implementation of a 2011 efficiency study will improve the biological treatment process	Wastewater	\$168,613	Convert the existing coarse bubble air diffusers and centrifugal aeration blowers to fine bubble air diffusers and rotary hybrid blowers; upgrade the existing oil heating and electric HVAC system with a natural gas based system.
Ware (Projected savings of \$46,660 and 259,217 kWh / year)	Wastewater	\$160,783	Install three new motors, variable speed drives, and dissolved oxygen, pH and temperature sensors into the aeration basins.
Wareham Fire District (Projected savings of \$16,500 and 101,300 kWh of on-site generation / year)	Drinking Water	\$200,000	Install a 81 kW ground-mounted solar photovoltaic system at the Maple Springs Water Purification Plant.
Webster (Projected savings of \$15,730 and 78,652 kWh / year)	Wastewater	\$26,351	Perform pumping system optimization by rebuilding 3 Return Activated Sludge (RAS) pumps at the wastewater treatment facility.
Westfield (Projected savings of \$7,820 and 54,684 kWh / year)	Wastewater	\$39,424	Perform pumping system optimization by rebuilding and epoxy coating 4 Influent wastewater pumps.
Worcester (Projected savings of \$161,634 and 1,776,194 kWh / year) 50% reduction in annual electricity usage	Drinking Water	\$200,000	Replace the existing 20-year old ozone generation system with the most current liquid oxygen system (LOX) system for improved treatment while using less electricity.



